

## **BALUSTER**

### **BACKGROUND OF THE INVENTION**

#### **1. Field of the Invention**

5 The invention relates to a baluster, more particularly to a baluster that can be threadedly engaged to a handrail.

#### **2. Description of the Related Art**

10 Referring to Figures 1 and 2, a conventional balustrade 1 includes a handrail 12 disposed above flooring 11, and a plurality of balusters 13 (only two are shown in Figure 1) disposed between the flooring 11 and the handrail 12. Each baluster 13 has a first connecting section 131 inserted into a groove 121 (see Figure 2) in the handrail 12, a second connecting section 15 132 connected to the flooring 11, and a decorative section 133 disposed between the first and second connecting sections 131, 132.

20 However, after the balusters 13 and the handrail 12 are assembled, and after the balustrade 1 has been in use for a certain period of time, the connection between each baluster 13 and the handrail 12 usually results in unstable swaying that may pose danger to people with limited mobility.

### **SUMMARY OF THE INVENTION**

25 Therefore, the object of the present invention is to provide a baluster that can engage threadedly a handrail so as to result in a stronger connection with

the handrail.

According to this invention, a baluster comprises a first connecting section, a second connecting section, and an intermediate section disposed between the first and second connecting sections. The first connecting section includes a first external thread adapted to be connected threadedly to a handrail. The second connecting section is adapted to be connected to a support base.

**BRIEF DESCRIPTION OF THE DRAWINGS**

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiments with reference to the accompanying drawings, of which:

Figure 1 is a fragmentary perspective view of a conventional balustrade;

Figure 2 is an enlarged fragmentary sectional view of Figure 1, illustrating the connection between a baluster and a handrail;

Figure 3 is a schematic view of the first preferred embodiment of a baluster according to the present invention;

Figure 4 is an enlarged fragmentary sectional view of Figure 3, illustrating how the baluster of the present invention can be connected to a handrail;

Figure 5 is a view similar to Figure 4, but illustrating the baluster of the present invention in

an engaged position with the handrail;

Figure 6 is a schematic view of the second preferred embodiment of a baluster according to the present invention; and

5        Figure 7 is a schematic view of the third preferred embodiment of a baluster according to the present invention.

#### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Referring to Figures 3 to 5, the first preferred  
10        embodiment of a baluster 4 according to the present invention is adapted to be mounted between a support base 2, such as a flooring, and a handrail 3, and is shown to comprise a first connecting section 41, a second connecting section 42, and an intermediate section 43.

15        The first connecting section 41 includes an external thread 411 adapted to be connected threadedly to a hole 31 in the handrail 3.

      The second connecting section 42 is adapted to be connected to the support base 2. In this embodiment,  
20        the second connecting section 42 is an upright rod section fitted into a groove 21 in the support base 2.

      The intermediate section 43 is disposed between the first and second connecting sections 41, 42, and includes a decorative part.

25        To install the baluster 4 on the handrail 3, the external thread 411 of the first connecting section 41 of the baluster 4 is threaded into the hole 31 in the

handrail 3, as best shown in Figure 5, so as to tightly engage the baluster 4 to the handrail 3, thereby achieving a fixed and stable connection between the baluster 4 and the handrail 3. The second connecting section 42 of the baluster 4 is inserted into the groove 21 in the support base 2 in a conventional manner.

Referring to Figure 6, the second preferred embodiment of a baluster 5 according to the present invention is shown to be substantially similar to the first preferred embodiment. However, in this embodiment, a second connecting section 52 of the baluster 5 includes a second external thread 521 that is opposite to a first external thread 511 of a first connecting section 51 and that is adapted to be connected threadedly to a hole 61 in a support base 6. The first external thread 511 and the second external thread 521 are reversed relative to each other.

When the baluster 5 is to be installed, the baluster 5 is rotated between the handrail 3 and the support base 6 so that the first and second connecting sections 51, 52 are threaded simultaneously and respectively into the support base 6 and the handrail 3, thereby connecting the baluster 4 fixedly and stably between the support base 6 and the handrail 3.

Referring to Figure 7, the third preferred embodiment of a baluster 7 according to the present invention is shown to be substantially similar to the first preferred

embodiment. However, in this embodiment, a second connecting section 72 of the baluster 7 includes a bottom flanged end 721, and a plurality of through holes 722 (only two are shown in Figure 7) formed in the bottom flanged end 721. The bottom flanged end 721 is fixed to the support base 9 by inserting threadedly a plurality of screws 8 (only two are shown in Figure 7) into the support base 9 through the through holes 722.

From the aforementioned description of the preferred embodiments, it is apparent that the baluster 4, 5, 7 of the present invention can be fixedly and stably connected to the handrail 3 and the support base 2, 6, 9 such that the unstable swaying commonly encountered in the prior art is not likely to occur.

While the present invention has been described in connection with what is considered the most practical and preferred embodiments, it is understood that this invention is not limited to the disclosed embodiments but is intended to cover various arrangements included within the spirit and scope of the broadest interpretation so as to encompass all such modifications and equivalent arrangements.